(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 5 August 2004 (05.08.2004)

PCT

(10) International Publication Number WO 2004/066355 A3

(51) International Patent Classification⁷: H04L 9/00, 9/32

G06F 11/30,

(21) International Application Number:

PCT/US2004/001581

(22) International Filing Date: 20 January 2004 (20.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/440,734

17 January 2003 (17.01.2003) US

(71) Applicant (for all designated States except US): THOM-SON LICENSING S.A. [FR/FR]; 46, Quai A. Le Gallo, Boulogne 92648 (FR).

(72) Inventor; and

- (75) Inventor/Applicant (for US only): BOUILLET, Aaron [US/US]; 1520 Persimmon Place, Noblesville, Indiana 46060 (US).
- (74) Agents: TRIPOLI, Joseph et al.; c/o Thomson Licensing, Inc., Two Independence Way, Suite 200, Princeton, New Jersey 08540 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

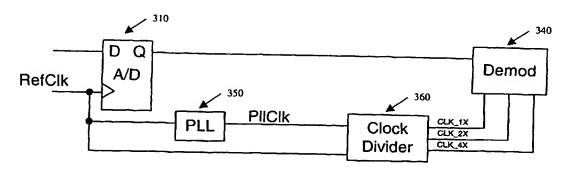
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 11 November 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A METHOD FOR USING A SYNCHRONOUS SAMPLING DESIGN IN A FIXED-RATE SAMPLING MODE



(57) Abstract: The present application generally relates to apparatuses such as television signal processing apparatus that process radio frequency signals. More specifically, the present application is particularly useful in integrated circuits that must combine circuitry operating in a synchronous-sampling mode that must be adapted for use with a fixed rate sampling mode application. According to an exemplary embodiment, the television signal processing apparatus 100 comprises a source of a fixed rate digital signal 220, signal processing circuitry 240 operating in a synchronous-sampling mode wherein the signal processing circuitry 240 comprises a signal representing a symbol rate, and an interpolator 230 for processing the fixed rate digital signal to yield samples at the symbol rate.



2004/066355 A3

INTERNATIONAL SEARCH REPORT

International application No.

A. CLAS	SSIFICATION OF SUBJECT MATTER		C17US04/01581		
IPC(7) : G06F 11/30; H04L 9/00, 9/32					
US CL : 713/200					
According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED					
Minimum documentation searched (classification system followed by classification symbols)					
U.S. : 713/200					
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched					
The state of the s					
Electronic data have consulted to the					
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)					
·					
C. DOCUMENTS CONSIDERED TO BE RELEVANT					
- TO BE REEL VANT					
Category *	Citation of document, with indication, where	appropriate, of the relevan	t passages	Relevant to claim No.	
	US 5,943,369 (Knutson et al) 24 August 1999 (24.08.1999), column 1 lines 23-25; column 2 lines 11-14; column 10 line 58-62; column 4 line 63-66; column 10 line 1-3			1-3, 6-11, 14-15 and	
Y	18-20				
	4-5, 12-13, 16-17				
Y	US 3,943,346 (Urkowitz et al) 9 March 1976 (09.03.1976), column 8 line 53-67; column 2			4, 12 and 16	
Y	ilie 20-28			4, 12 am 10	
1	US 2002/0154620 (Azenkot et.al) 24 October 2002 (24.10.2002), paragraph [0375] 5, 13 and 17			5, 13 and 17	
i					
1			• 1		
	·				
			í		
}					
<i>[</i>]			ŀ		
1					
					
	documents are listed in the continuation of Box C.	See patent fam	ily annex.		
 Special categories of cited documents: "T" later document published after the international filing date or pr 				national filing date or priority	
"A" dockment defining the general state of the art which is not considered to be			nflict with the applicate underlying the inven-	tion but cited to understand the	
or particula	ar relevance	•			
, considered to			or cannot be considere	aimed invention cannot be d to involve an inventive step	
"L" document which may throw doubts on priority claim(s) or which is sixed to when the document is taken			it is taken alone	aken alone	
establish the publication date of another citation or other special reason (as "Y" doct			document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is		
Consul			lve an inventive sten u	when the document is locuments, such combination	
ţ.	being obvious to a person skilled in the art				
"P" document p	document published prior to the international filing date but later than the "&" document member of the same patent family				
737					
		Date of mailing of the international search report			
30 August 2004 (30.08.2004)		13 SEP 2004			
	ling address of the ISA/US	Authorized officer			
	Stop PCT, Attn: ISA/US missioner for Patents	Ayaz R Sheikh			
P.O.	Box 1450		2000	-	
Facsimile No.	andria, Virginia 22313-1450 (703) 305-3230	Telephone No. 703-305-	いりいり		
form PCT/ISA/210 (second sheet) (January 2004)					
	((sminm) 2004)	//			